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# Antimicrobial prescription patterns in organic and conventional pig herds in Denmark

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## Aim

Study the differences and similarities in prescription patterns for organic and conventional pig herds in Denmark

## Data included

Herd-level antimicrobial prescription data from 2016 were extracted from **VetStat**

Information regarding herd type and number of animals in each herd were extracted from **CHR**

**VetStat:** The Danish Veterinary Medicines Statistics Program covers sales of veterinary prescription medicine for all pig herds in Denmark

**CHR:** The Central Husbandry Register covers herd-level information about number of animals, type of herd and geographical location.

The two databases are hosted and maintained by The Danish Veterinary and Food Administration

## Results



Organics pig herds in 2016  
(N=122)

Organics pig herds with antimicrobial prescription in 2016  
(N=57)

133 kg active compound prescribed for organic pig herd in 2016



Corresponding to 2 % of the total number of herds registered in CHR

Corresponding to 0.2 % of the total amount of active compound prescribed for pigs in DK

**Table 1.** Antimicrobial prescription data from Danish organic and conventional herds in 2016. Doses are calculated based on information from The Danish Veterinary and Food Administration. In 2016, 31,806,238 pigs were produced in Denmark of which approx. 99 % are conventional and 0.8 % are organic (source: VetStat and CHR)

| Age group                | Indication       | Doses/produced animal/year |         | Distribution pr. age group |         |
|--------------------------|------------------|----------------------------|---------|----------------------------|---------|
|                          |                  | Conventional               | Organic | Conventional               | Organic |
| Weaners<br>(7-30 kilos)  | Gastrointestinal | 5.61                       | 0.31    | 80 %                       | 65 %    |
|                          | Respiratory      | 0.68                       | 0.15    | 10 %                       | 30 %    |
|                          | Arthropathy      | 0.72                       | 0.03    | 10 %                       | 5 %     |
| Finishers<br>(>30 kilos) | Gastrointestinal | 1.00                       | 0.19    | 68 %                       | 54 %    |
|                          | Respiratory      | 0.15                       | 0.02    | 10 %                       | 7 %     |
|                          | Arthropathy      | 0.32                       | 0.14    | 22 %                       | 40 %    |

Gastro-intestinal indications is the most often used indication in both types of production

A larger proportion is prescribed for respiratory indications in organic weaners and for arthropathy indications in organic finishers

## Danish legislation on organic pig farming – important when studying data from VetStat

- Weaner and finisher pigs are only allowed to be treated once
- The farmer can only get prescriptions equivalent to treatment of animals for maximum five days
  - Medicine left after treatment cannot be re-prescribed as in conventional pig farming
  - The rest of a package must be returned to the pharmacies or destroyed
    - VetStat: No official registration of the amount of returned medicine, and only whole packages are registered
    - There may be a margin of error when reporting antimicrobial use in organic pig farms based on VetStat data